

# HIGH-SPEED BROADBAND ROUTER USER MANUAL

MODELS 523608 & 523615



INT-523608/523615-UM-0307-02

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# 1. INTRODUCTION

Thank you for purchasing the INTELLINET™ NETWORK SOLUTIONS High-Speed Broadband Router. This user manual includes hardware specifications, installation guidelines, configuration guidelines and directions for using the device.

## 1.1 Warnings

- **Only use the power adapter provided by the manufacturer.**
- **Do not drop the router: It can damage the router’s electronic components.**
- **Do not disassemble the router: Doing so voids the warranty.**
- **Avoid extended exposure to sunlight to prevent overheating.**
- **Keep the router in a dry place and away from heat.**

## 1.2 Package Contents

- High-Speed Broadband Router
- Switching DC Power Adapter (5 V, 1.0 A)
- RJ-45 Ethernet Cable
- User manual

## 1.3 Features

This High-Speed Broadband Router is a highly integrated device with many functions, such as Gateway, Switch, DHCP server and Firewall.

**Network Address Transform (NAT):** With the provided Internet application, this device allows more than one user to connect with the Internet at the same time by sharing one public IP address. It supports many connection options: xDSL, cable modem LAN/leased line and so on.

**4 Ports 10/100 M Switch:** Four 10/100 Mbps ports with MDI/MDI-X support (Auto Uplink, which eliminates the need for using a crossover cable when connecting to a different switch port).

**PPPoE (ADSL) Automatic Disconnection/Connection:** Users have the option of choosing automatic disconnection based on idle time and re-connect on demand.

**DHCP Server Supported:** All of the networked computers can retrieve TCP/IP settings automatically from this device.

**Static IP Address Binding:** Authorizes users to manage and configure a PC in LAN in most cases by binding the MAC address and IP address together.

**System Log:** History of all activity.

**UPnP:** Supports Microsoft's UPnP (Universal Plug and Play Service).

**Web-Based Management:** The router is easily and conveniently configured by any standard Internet Web browser.

**Internet Access Control:** Different settings can be set up for different users.

**Packet Filter:** Port filter, IP address filter, MAC address filter, key word filter.

**Virtual Server:** Allows other users from the Internet to access WWW, the FTP server or other servers in the LAN.

**QoS (Quality of Service):** Allows control of your Internet bandwidth. Set a minimum bandwidth for a certain application, or limit the bandwidth an application can consume. The router features IP- and port-based bandwidth control, as well.

**Scheduler:** Manage and control the Internet access for individual users.

**DMZ Host:** Set up one computer to operate in the Demilitarized Zone without any firewall interference.

**Remote Management:** Remotely configure the router settings.

**DDNS:** Support for dynamic DNS services, such as [www.dyndns.org](http://www.dyndns.org).

**Remote Wake-up:** Remotely wake up PCs in the LAN.

**Support VPN Pass-through:** Supports VPN pass-through PPTP traffic. A user connected to the device can establish outgoing connections to remote VPN servers.

**VPN server:** An integrated VPN server allows five simultaneous client connections.

## 2. INSTALLATION

### 2.1 Before Installation

- First, confirm that your computer has a Java Script-capable Web browser installed.
  - Make sure that your computer has a LAN card installed and correctly configured for TCP/IP.
  - If using xDSL, you will need the username and password provided by your ISP.
- NOTE:** If your computer has ADSL PPPoE dial-up software installed, back up your installation software and uninstall your ADSL PPPoE dial-up software before proceeding with the installation.

### 2.2 Installation

1. Set up the WAN connection: Connect the broadband RJ-45 cable (xDSL, Cable modem or LAN/leased cable) with the WAN port of the router.
2. Set up the LAN connection: Connect your computer's LAN card port or your switch's UPLINK port with one LAN port of the router using a common network cable. **NOTE:** All LAN ports of the router can automatically sense cross cable, so

- straight-through or cross cable can be used to connect the LAN card or switch.
- Turn on the power by pressing the power button on the back of the router. The device will perform a self test. During the self test, the PWR LED, CPU/RUN LED and LAN port LEDs of connected ports are lit. After the self test, the CPU/RUN LED starts flashing (on-off-on-off).
  - Start the computer.

## 2.3 Indicators and Connections

### 2.3.1 Model 523608, 4-Port



#### LED Indication

PWR	Continuously lit indicates power to the router.
RUN/CPU	Slowly blinking indicates the system is operational after a proper startup.
WAN	Blinking indicates data is being transmitted to/from the Wide Area Network.
1-4	Blinking indicates data is being transmitted to/from the Local Area Network.



#### Port/Jack Indication

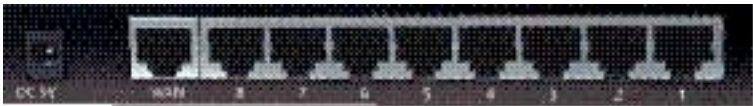
DC 5 V	Connects to the power adapter.
Reset	This can be to restart the router, but all configurations that may have been entered will be restored to the original factory defaults.
WAN	Connects xDSL/cable modem or special cable.
1-4	The LAN ports connect to PCs, hubs, switches and so on.

### 2.3.2 Model 523615, 8-Port



#### LED Indication

- PWR** Continuously lit indicates power to the router.
- RUN/CPU** Slowly blinking indicates the system is operational after a proper startup.
- WAN** Blinking indicates data is being transmitted to/from the Wide Area Network.
- 1–8** Blinking indicates data is being transmitted to/from the Local Area Network.
- RESET** Approx. 5 seconds after pressing to turn on the power, the RUN LED will blink quickly. Release the RESET button. (After router Reset startup, all configurations will restore to defaults.)



#### Port/Jack Indication

- DC 5 V** Connects to the power adapter.
- WAN** Connects xDSL/cable modem or special cable.
- 1–8** The LAN ports connect to PCs, hubs, switches and so on.

## 3. LOCAL COMPUTER SETUP

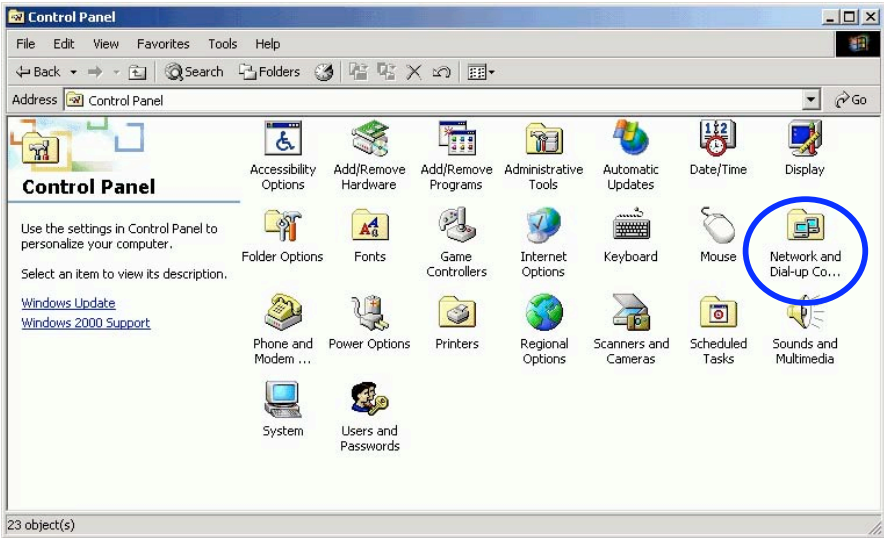
The High-Speed Broadband Router acts as a DHCP server, which means that it provides IP addresses to all connected computers. By default, Windows, Linux and Mac OS systems will try to obtain an IP address from a DHCP server, if present and no configuration of the computer's IP settings are necessary. In order to test your IP settings, simply start your computer while connected to the router. Then open your Web browser and open <http://192.168.10.1>.

If the router's Web Admin screen appears, you can skip this section and proceed

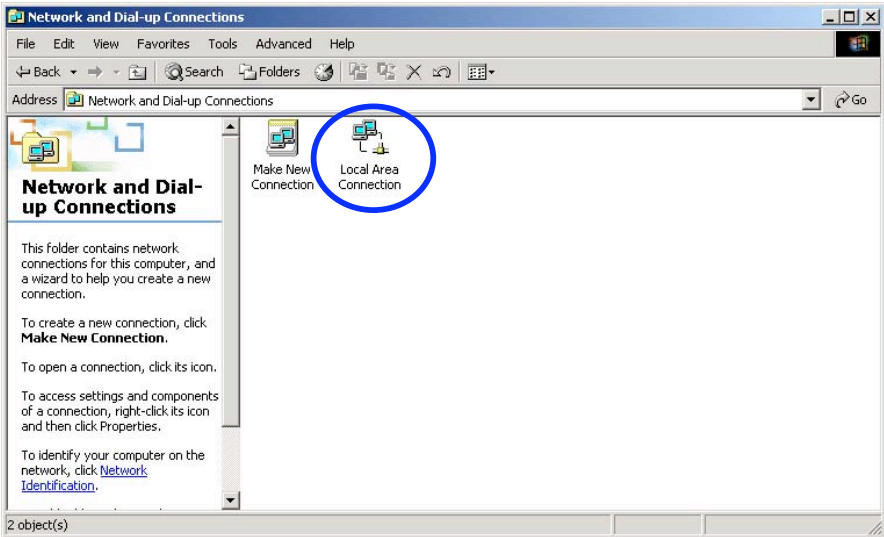
directly to Section 4. If you are unable to open the router's Web Admin screen, follow whichever instructions below apply to the operating system you use.

### 3.1 Windows 2000 Setup

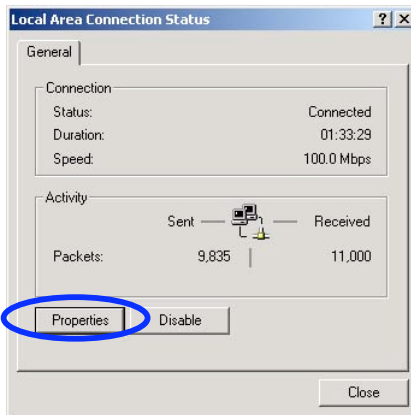
1. Install the High-Speed Broadband Router.
2. Start Windows 2000 and check whether the LAN LED is on or off. If off, confirm the connection between the computer and the router is correct.
3. Click "Start" → "Setting" → "Control Panel."



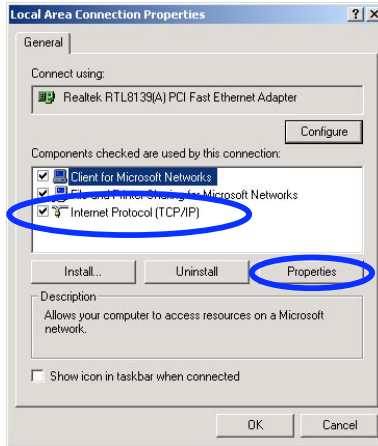
4. Double-click "Network and Dial-up Connection" in "Control Panel."



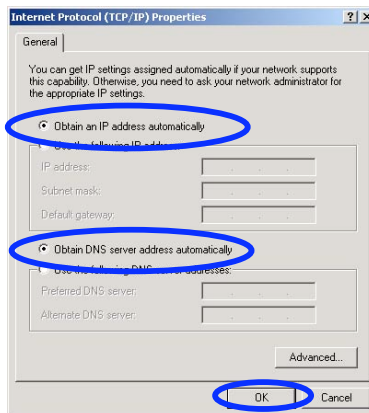
5. Click “Local Area Connection” → “Properties” → “Internet Protocol (TCP/IP)” and “Properties.”







6. Click the “General” tab; select “Obtain an IP address automatically” and “Obtain DNS server address automatically.”
7. Click “OK.”



8. Click “Start” → “Run.”
  9. Input “cmd”; then click “OK.”
  10. Input “ipconfig” in the pop-up command window.
- NOTE:** Make sure your IP is the same as that listed below. If it’s the same, then your configuration is successful. If not, redo the above steps and restart your computer.

- The IP address is between **192.168.10.2** and **192.168.10.254**
- The subnet mask is **255.255.255.0**
- The default gateway is **192.168.10.1** (the router's default IP address)



```
C:\WINDOWS\system32\cmd.exe
C:\>ipconfig
Windows IP Configuration

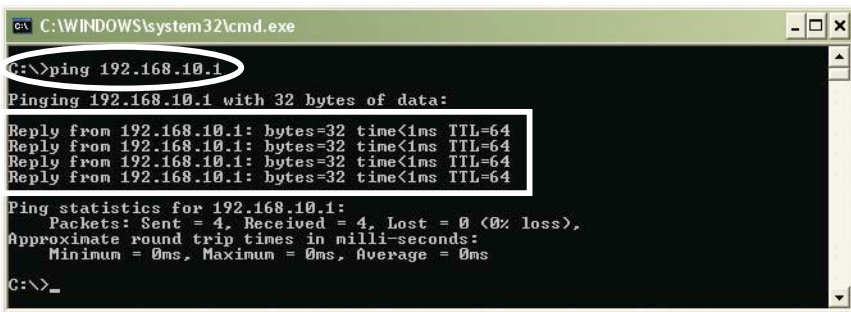
Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : local
    IP Address. . . . .               : 192.168.10.2
    Subnet Mask . . . . .            : 255.255.255.0
    Default Gateway . . . . .        : 192.168.10.1

C:\>_
```

10. Type “ping 192.168.10.1,” then hit “Enter.”

11. If you can see “Reply from 192.168.10.1: bytes=32 time=2ms TTL=64,” then the connection between your computer and Broadband Router is completed.



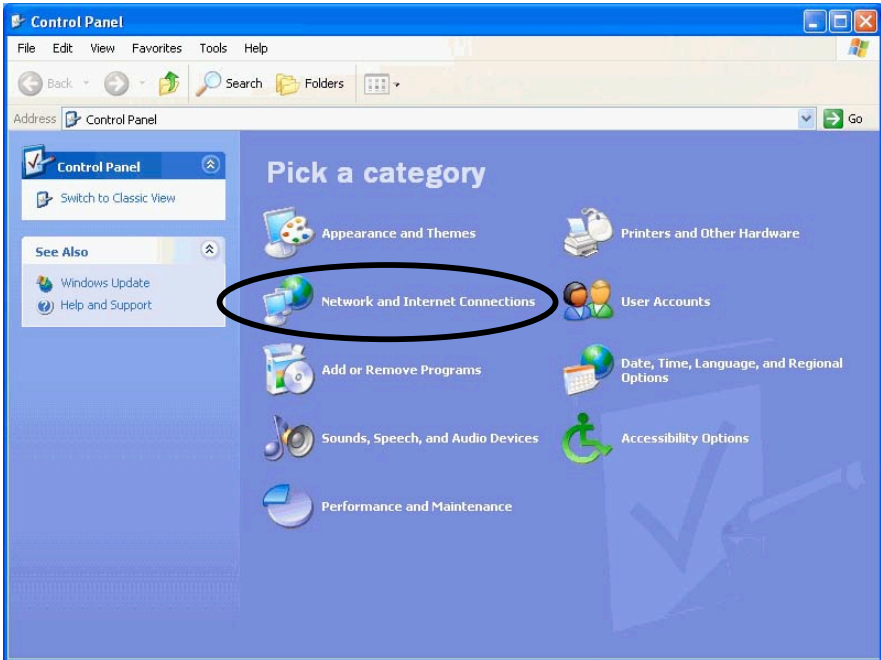
```
C:\WINDOWS\system32\cmd.exe
C:\>ping 192.168.10.1
Pinging 192.168.10.1 with 32 bytes of data:
Reply from 192.168.10.1: bytes=32 time<1ms TTL=64
Reply from 192.168.10.1: bytes=32 time<1ms TTL=64
Reply from 192.168.10.1: bytes=32 time<1ms TTL=64
Reply from 192.168.10.1: bytes=32 time<1ms TTL=64

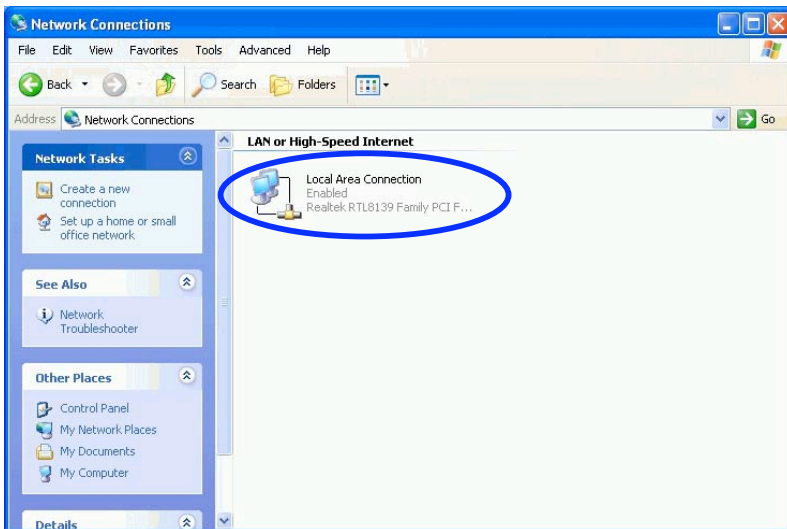
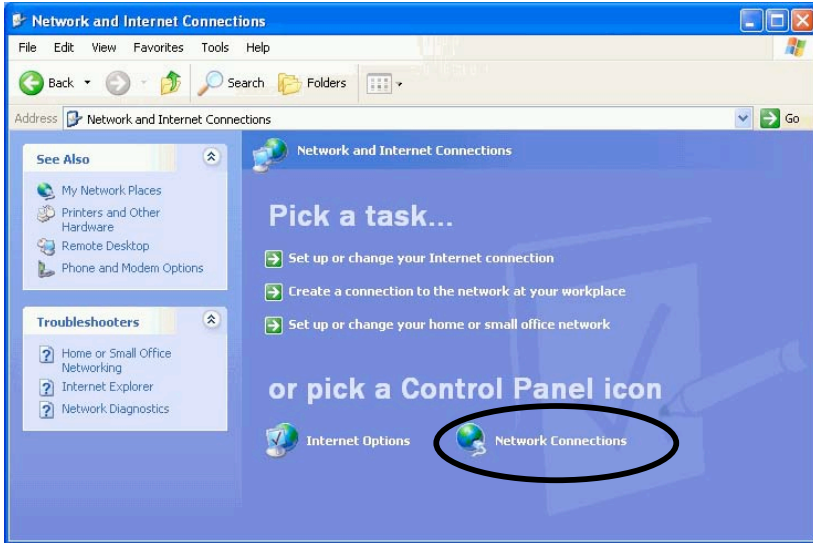
Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

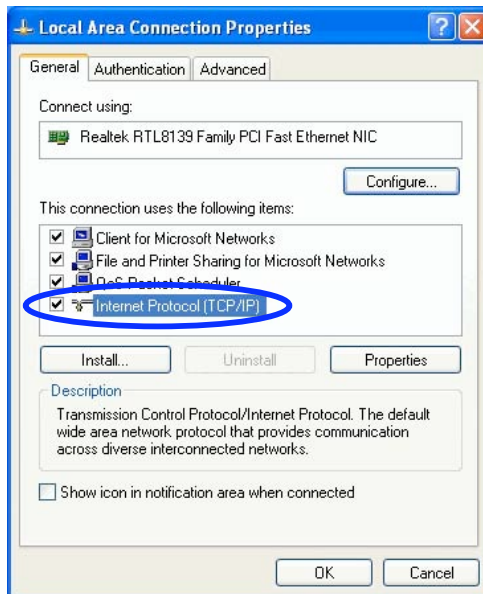
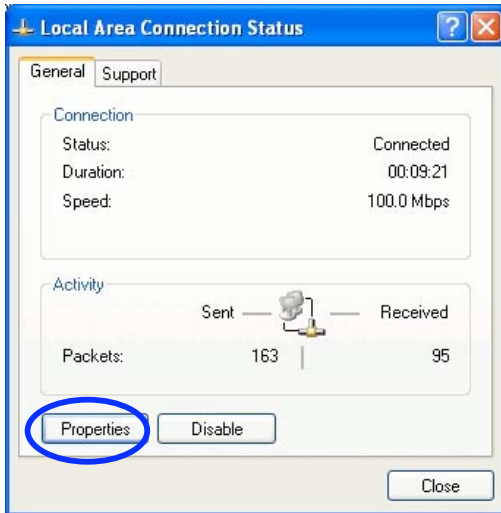
C:\>_
```

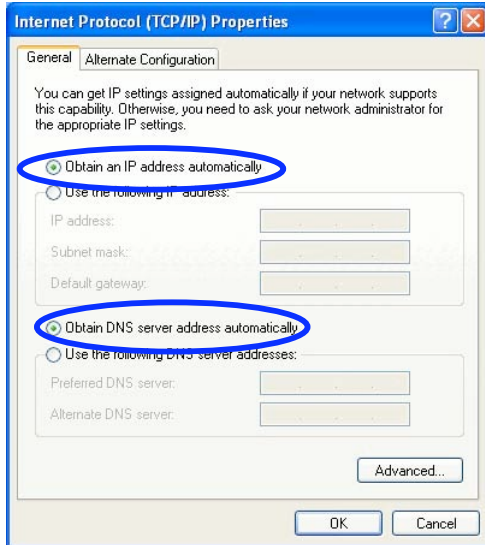
### 3.2 Windows XP Setup

1. Install the High-Speed Broadband Router.
2. Start Windows XP and check whether the LAN LED is on or off. If off, confirm that the connection between the computer and the router is correct.
3. Click “Start” → “Setting” → “Control Panel.”
4. Double-click “Network and Internet Connections” in “Control Panel.”
5. Click “Network Connection” → “Local Area Connection” → “Properties” → “Internet Protocol (TCP/IP)” and “Properties.”
6. Click “General“; select “Obtain an IP address automatically” and “Obtain DNS server address automatically.”
7. Click “OK.”







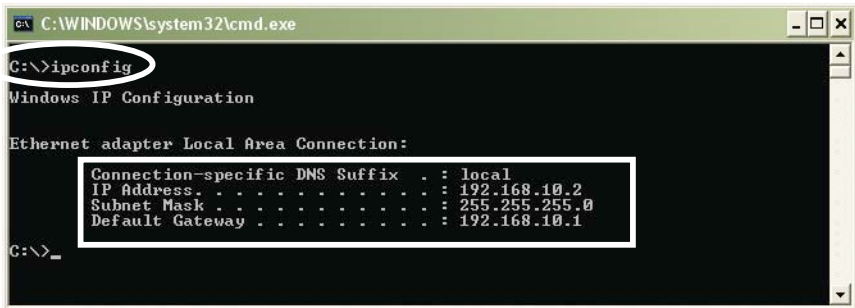


8. Click “Start” → “Run”; enter “cmd”; click “OK.”

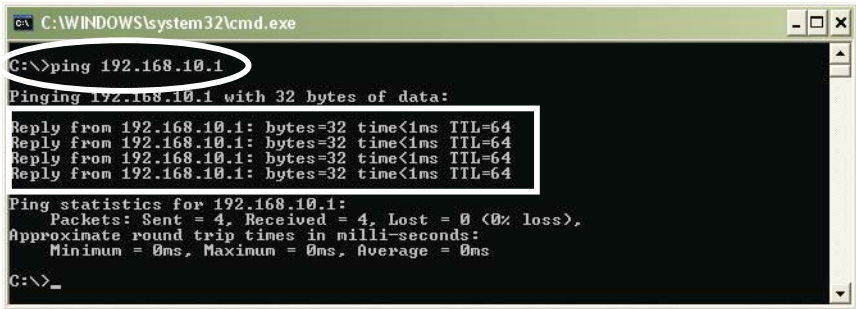
9. Type “ipconfig” in the pop-up command window.

**NOTE:** Make sure the IP information is the same as shown below.

- The IP address is between **192.168.10.2** and **192.168.10.254**
- The subnet mask is **255.255.255.0**
- The default gateway is **192.168.10.1**



11. Input “ping 192.168.10.1,” then “Enter.”
12. If you can see “Reply from 192.168.10.1: bytes=32 time=2ms TTL=64,” then the connection between your computer and the router is completed.



```
C:\WINDOWS\system32\cmd.exe
C:\>ping 192.168.10.1
Pinging 192.168.10.1 with 32 bytes of data:
Reply from 192.168.10.1: bytes=32 time<1ms TTL=64
Reply from 192.168.10.1: bytes=32 time<1ms TTL=64
Reply from 192.168.10.1: bytes=32 time<1ms TTL=64
Reply from 192.168.10.1: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>_
```

## 4. ROUTER SETUP

### 4.1 Start Internet Explorer to Log In

1. Start your Web browser.
2. Enter “http://192.168.10.1” in the Web browser’s address bar. (192.168.10.1 is the default IP address of the router.)

Address

3. You will then see the following login Web page.



Click the “Login” button to enter the configuration and configure the router manually. This may be required if the Internet Wizard fails to detect the settings automatically. The Internet Wizard lets you configure your Internet connection quickly and conveniently.

You can login directly without account and password confirmation because there is no account information required by default. It is recommended that a password is assigned immediately.

**Conn. Type:** The router’s current connection type. Dynamic IP (DHCP) is the default value.

**Conn. Status:** The router’s current connection status.

**WAN IP:** The router’s current WAN (Internet) IP address.

**Connected PC:** The IP address of the computer that connects to the router.

## 4.2 PPPoE Configuration

This connection option is suitable for a virtual dial-up Internet connection.

1. Open the external ADSL modem and check the WAN LED of the router. If the WAN LED is off, check the network cable between the external modem’s LAN/Ethernet port and the router’s WAN port.
2. Click “Basic setup” → “WAN setup” as shown.



3. Select the “PPPoE User (ADSL)” radio button.
4. Key in the “User ID” and “Password” provided by your Internet service provider.
5. Click the “Apply” button. You will then see the following pop-up window:

Conn. Type	PPPoE User (ADSL)
Conn. State	Connecting to internet
<input type="button" value="Close"/>	

If “Conn. State” shows “Successfully connected,” the configuration is correct.

6. Click “Show Internet connection status” and proceed to section 4.5.1.

If “Conn. Status” shows “Invalid ID/password.” the configuration is incorrect. Click the “Close” button and check your ID and password.

Conn. Type	PPPoE User (ADSL)
Conn. State	Invalid ID/Password
<input type="button" value="Close"/>	

If “Conn. Status” is unchanged, check whether your service type is correct.

Conn. Type	PPPoE User (ADSL)
Conn. State	Connecting to internet
<input type="button" value="Close"/>	

7. Confirm the WAN connection status: If the WAN connection is successfully established, then by clicking “Show Internet Information” you can enter the WAN status Web page; or click “Status” → “WAN status” and verify the following.

- Connection Type should be PPPoE (ADSL)
- Connection Status should be “successfully connected”
- Physical Address shows the router’s WAN port MAC address.
- WAN IP Address, Subnet Mask, Default Gateway, Primary DNS Server and Secondary DNS Server can be different from the following values. (These addresses are provided by your ISP.)

**INTELLINET** BRINGING NETWORKS TO LIFE

Status Basic Setup System QoS NAT Advanced

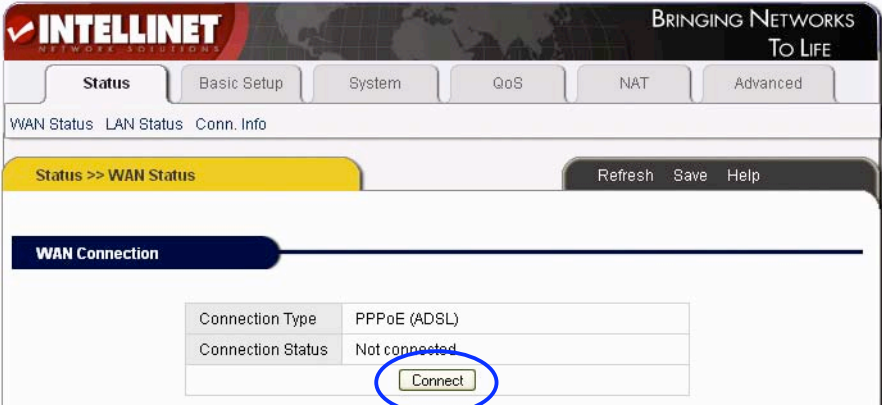
WAN Status LAN Status Conn. Info

Status >> WAN Status Refresh Save Help

**WAN Connection**

Connection Type	PPPoE (ADSL)
Connection Status	Successfully connected
Physical Address	00-0E-E8-12-11-11
WAN IP Address	10 . 0 . 0 . 3
Subnet Mask	255 . 255 . 255 . 255
Default Gateway	10 . 0 . 0 . 3
Primary DNS Server	202 . 96 . 134 . 133
Secondary DNS Server	202 . 96 . 128 . 68
<input type="button" value="Disconnect"/>	

Click “Disconnect” to disconnect from the Internet.



“Connect” is a manual connection button. By clicking it, the system can be connected to the Internet again.

Click “Save” to save the current configuration.

Restart all PCs connected to the router.



**NOTE:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

#### Other configuration options of the PPPoE WAN setup screen:

**MTU:** Input the MTU value of the data package (the default value is 1454). Do not change it unless you are experiencing connection problems. Your ISP can give you the correct value in case the default value does not work.

**Disconnect PPP session if idle time is longer than \_ Min:** If you choose this option and set up the time “T,” then the router automatically disconnects from the Internet after “T” minutes of idle time.

**Connect On Demand:** The router can automatically connect with the Internet if there is Internet access after disconnection. Note: During usage, if there is disconnection due to external causes, then the router will try to connect with the Internet at once until a successful re-connection is made. This function is a router internal function and does not affect the **Connect On Demand** function. **Connect**

**On Demand** is only effective for **Disconnect PPP session if idle time is longer than \_ Min.**

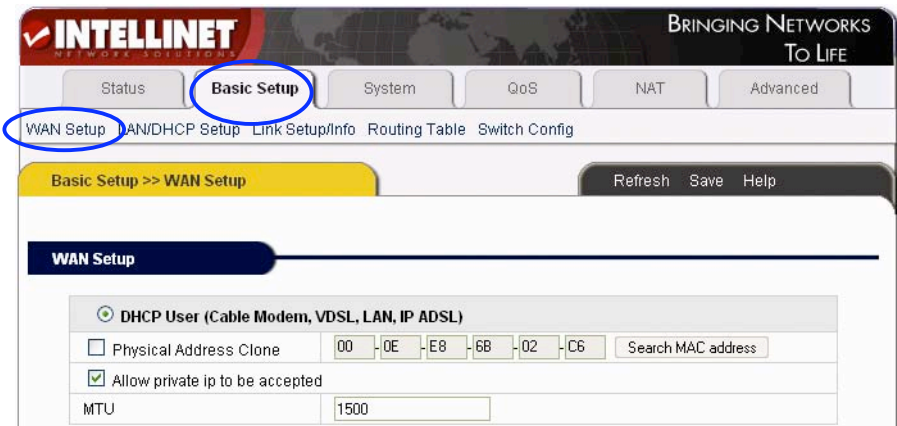
**Connect Manually:** With this option, users have to connect with the Internet manually after disconnection. This option is only effective with **Disconnect PPP session if idle time is longer than \_ Min.**

**Prevent reconnection although no response from PPP server:** This option is for shutting off the router's internal automatic re-connection function. By choosing this option, the router will not try to re-connect at once if an external network (ISP) disconnects the connection.

### 4.3 Dynamic IP (Cable Modem) Configuration

With this connection option, the router can get IP addresses automatically from an ISP. It is suitable for connection options such as cable modem, LAN and so on.

1. Turn on the external cable modem and check the WAN LED of the router. If the WAN LED is off, confirm that the network cable connection between the modem and the WAN port is correct.
2. Click "Basic Setup" → "WAN Setup."
3. Choose DHCP User (Cable modem, VDSL, LAN, ...)
4. Click "Apply" to complete.



5. You will see the following pop-up window:



If Conn. State shows "Successfully connected," the configuration is correct. Click "Show Internet Information" and proceed to section 4.5.1.

Conn. Type	DHCP
Conn. State	Successfully connected
<input type="button" value="Close"/>	

6. If Conn. State remains as “Connecting to Internet,” do the following:

- Close the pop-up window.
- Turn the cable modem power off then on, and check the WAN LED status.

7. Re-click the “Apply” button.

8. Check the WAN Connection Status: If the status is “Successfully connected,” click “Show Internet Information” to enter the WAN status page; or click Status → WAN Status, as shown.

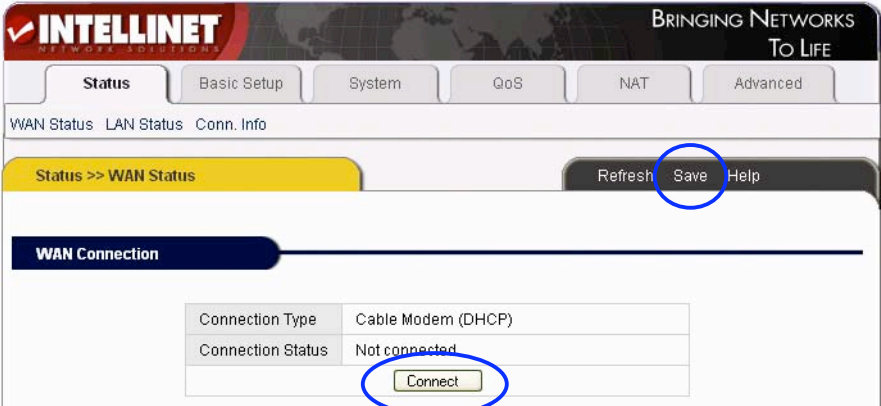
The screenshot shows the INTELLINET network management interface. At the top, there is a navigation bar with tabs for "Status", "Basic Setup", "System", "QoS", "NAT", and "Advanced". The "Status" tab is selected and circled in blue. Below the navigation bar, there are sub-tabs for "WAN Status", "LAN Status", and "Conn. Info". The "WAN Status" sub-tab is also circled in blue. The main content area shows "Status >> WAN Status" with "Refresh", "Save", and "Help" buttons. Below this, there is a section titled "WAN Connection" containing a table with the following data:

Connection Type	Cable Modem (DHCP)
Connection Status	Successfully connected
Physical Address	00-0E-E8-6B-02-C6
WAN IP Address	10 .10 .10 .81
Subnet Mask	255 .255 .252 .0
Default Gateway	10 .10 .8 .1
Primary DNS Server	10 .10 .8 .10
Secondary DNS Server	
<input type="button" value="Disconnect"/>	

If the WAN connection is successfully established, you can see the following:

- Connection Type should be “Cable Modem (DHCP)”
- Connection Status should be “Successful connected”
- Physical Address shows the router WAN port MAC address
- WAN IP Address, Subnet Mask, Default Gateway, Primary DNS Server and Secondary DNS Server depend on your system configuration and information provided by the ISP.

The “Disconnect” button causes the router to release the WAN port IP address and disconnect from the Internet.



The “Connect” button is a manual WAN port IP address refresh function button. If clicked, the WAN port will re-obtain a dynamic IP address and connect with the Internet.

Click the “Save” button to save the current configuration, then restart all PCs connected with router.

#### **Other configuration options:**

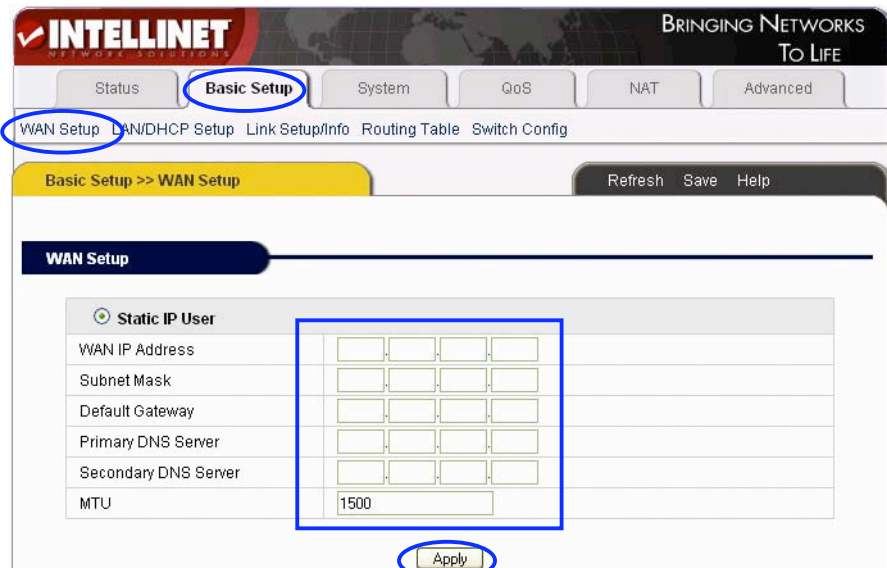
**Physical address Clone:** If you want to change a WAN port MAC address, you can choose this option. If not selected, the WAN MAC address is the default value. If using this option, the displayed MAC address is your current MAC address. You can also manually add the WAN port MAC address; without the option, the WAN port MAC address will restore to its default value.

**Allow private IP to be accepted:** Allows a WAN port to be assigned a private IP address.

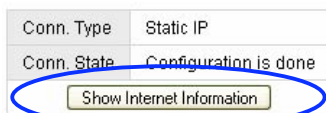
#### **4.4 Static IP Configuration**

If you have a static IP address provided by your ISP, you must choose this option.

1. Turn on the external modem and check the WAN LED of the router. If the WAN LED is off, check the network cable between the external modem and the WAN port.
2. Click “Basic Setup” → “WAN Setup” as shown:



3. Input WAN IP Address, Subnet Mask, Default Gateway, Primary DNS Server and Secondary DNS Server as provided by your ISP.
4. Click “Apply” to complete. You will see the following pop-up window:



5. Check WAN Conn. State by clicking “Show Internet Information” or click on “Status” → “WAN status.”

The screenshot shows the INTELLINET network management interface. At the top, there is a navigation menu with tabs for 'Status', 'Basic Setup', 'System', 'QoS', 'NAT', and 'Advanced'. The 'Status' tab is selected and circled in blue. Below the navigation menu, there are sub-tabs for 'WAN Status', 'LAN Status', and 'Conn. Info'. The 'WAN Status' sub-tab is also circled in blue. The main content area displays 'Status >> WAN Status' and includes buttons for 'Refresh', 'Save', and 'Help'. The 'Save' button is circled in blue. Below this, there is a section titled 'WAN Connection' containing a table with the following data:

Connection Type	Static IP			
Connection Status	Successfully connected			
Physical Address	00-0E-E8-6B-02-C6			
WAN IP Address	123	123	123	100
Subnet Mask	255	255	255	0
Default Gateway	123	123	123	1
Primary DNS Server	123	123	123	10
Secondary DNS Server	123	123	123	11

If the WAN connection is successfully established, you can see the following:

- Connection Type should be “Static IP”
- Connection Status should be “Successfully connected”
- Physical Address shows the router’s WAN port MAC address (physical address).
- WAN IP Address, Subnet Mask, Default Gateway, Primary and Secondary DNS server as entered.

6. Click the “Save” button to make the configuration permanent.

 **Note: Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.**

## 4.5 Status

### 4.5.1 WAN Status

Click “Status” → “WAN Status.”



**INTELLINET** NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

**Status** Basic Setup System QoS NAT Advanced

WAN Status LAN Status Conn. Info

Status >> WAN Status Refresh Save Help

**WAN Connection**

Connection Type	Static IP			
Connection Status	Successfully connected			
Physical Address	00-0E-E8-6B-02-C6			
WAN IP Address	123	123	123	.100
Subnet Mask	255	255	255	.0
Default Gateway	123	123	123	.1
Primary DNS Server	123	123	123	.10
Secondary DNS Server	123	123	123	.11

This page shows current Internet connection status (WAN port), including Connection Type, Connection Status, WAN IP Address, Subnet Mask, Default Gateway and DNS server. With dynamic IP or PPPoE DSL connections, the “Connect” or “Disconnect” button will be shown on this page. Click the “Connect” button to connect with the Internet; click the “Disconnect” button to disconnect from the Internet.

**Refresh:** Refreshes the current Web page. All of the following Web pages will have this button with the same function.

**Save:** Saves the configuration of the router whenever you make a change to the configuration on any screen. Failing to save the configuration will result in a loss of all parameter changes made since the last time the configuration was saved.

### 4.5.3 LAN Status

Click “Status” → “LAN Status.”

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[Status](#)
[Basic Setup](#)
[System](#)
[QoS](#)
[NAT](#)
[Advanced](#)

[WAN Status](#)
[LAN Status](#)
[Conn. Info](#)

Status >> LAN Status Refresh Save Help

**LAN Information**

Physical Address	00-0E-E8-6A-02-C6						
System IP Address	192	168	10	1			
Subnet Mask	255	255	255	0			
DHCP IP Pool	192	168	10	2 - 192	168	10	254
Number of IP allocated	1						

**IP allocated**

Number	IP Address	Physical Address	Etc.
1	192.168.10.2 (S-LAPTOP)	08:00:46:C4:B2:FA	Dynamic

**LAN Information:** Shows the router’s current LAN connecting status, DHCP server settings, including MAC address (physical address) of the LAN port, and quantities of IP address handed out to other computers or LAN clients.

**IP allocated:** Overview of all connected computers with IP Address, Physical Address (MAC Address) and the connection type (wired, dynamic IP, etc.)

## 4.6 Basic Setup

### 4.6.1 WAN Setup

Click "Basic Setup" → "WAN Setup."

**INTELLINET** NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

[Status](#)
[Basic Setup](#)
[System](#)
[QoS](#)
[NAT](#)
[Advanced](#)

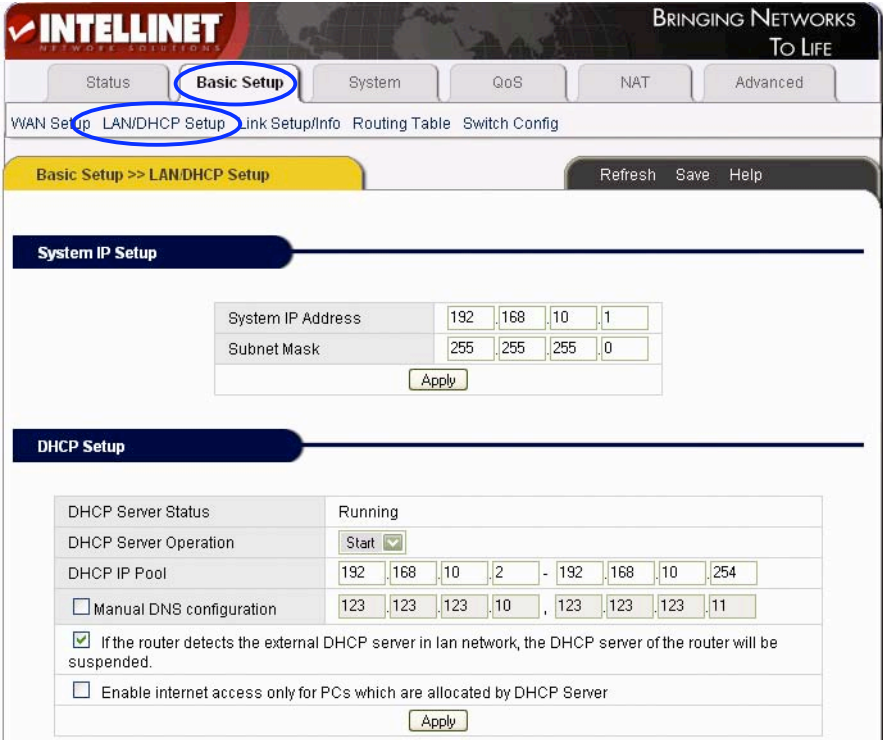
[WAN Setup](#)
[Wireless Setup](#)
[LAN/DHCP Setup](#)
[Link Setup/Info](#)
[Routing Table](#)

Basic Setup >> WAN Setup Refresh Save Help

PPPoE (ADSL), Dynamic IP and Static IP setup procedures are illustrated in sections 4.2, 4.3 and 4.4, respectively.

### 4.6.2 LAN Setup

Click "Basic Setup" → "LAN/DHCP Setup."



This page lets you configure the LAN IP settings of the router, along with the DHCP server settings.

**System IP Setup:** This section is for changing the IP router LAN port address.

**System IP address:** The IP address of the router. Use this address to access the router's administrator menu.

**Subnet Mask:** The standard network mask is 255.255.255.0. It normally should not be changed.

**DHCP Setup:** TCP/IP protocol configuration includes IP address, subnet mask, Gateway and DNS server. The DHCP function automatically configures the TCP/IP protocol for all connected computers.

**DHCP Server Status:** The current status of the DHCP server.

**DHCP Server Operation:** Enable or disable the DHCP server.

**DHCP IP Pool:** The IP address range the router assigns to connected computers. It is 192.168.10.2 – 192.168.10.254 by default.

**Manual DNS configuration:** Manually configure the DNS server the DHCP server assigns to the connected computers. Normally, this option is not required.

**If the router detects the external DHCP server in the LAN network, the DHCP server of the router will be suspended:** Uncheck this option if you have other DHCP servers in your network but still wish to utilize the router's own DHCP server.


**Enable Internet access only for PCs that are allocated by the DHCP server:** If activated, no computer with a static IP address will be able to connect to the Internet through the router. This option forces client PCs to obtain an IP address from the router.

**Static Lease Management:** This function is often referred to as Static DHCP. With this function enabled, you can assign a “fixed” IP address to one or more computers in your network via DHCP, where you normally would not have control over which IP address is assigned to which computer.

	IP Address	Physical Address
<input type="checkbox"/>	192.168.10.2	08-00-46-C4-B2-FA

**Add hardware address & IP pair on the real network:** This function lets you find all computers currently connected and allows you to make their IP address assignment permanent. Check the box in front of the IP address and click on “Add.”

**Add hardware address & IP pair manually:** If this option is enabled, the IP address and physical address (MAC address) need to be entered manually.

 **NOTE:** In order to use DHCP function of the router, the TCP/IP protocol of the connected computers must be configured as “Obtain an IP Address automatically” (default setting). Also, save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

**Twin IP Setup:** With Twin IP selected, the router can assign its WAN address to a specified PC.

Twin IP

Search MAC address IP Update Duration \_\_\_\_\_ Seconds

**Internet Access Restriction:** You can define the maximum number of clients with access to the Internet at the same time. The default value “0” means that there is no limitation. Enter the value “15” if you wish to make sure that at no time more than 15 PCs connect to the Internet.



The screenshot shows a configuration window titled "Internet Access Restriction". The title bar is dark blue with the text "Internet Access Restriction" in white. Below the title bar, there is a light gray control panel. On the left, there is a checked checkbox followed by the text "Number of PC". To the right of this text is a small white input field containing the number "0". Further to the right is a yellow button with the text "Apply".

### 4.6.3 Link Setup/Info

Click “Basic setup” → ”Link Setup/Info.”

**INTELLINET** NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

[Status](#)
[Basic Setup](#)
[System](#)
[QoS](#)
[NAT](#)
[Advanced](#)

[WAN Setup](#)
[LAN/DHCP Setup](#)
[Link Setup/Info](#)
[Routing Table](#)
[Switch Config](#)

Basic Setup >> Link Setup/Info Refresh Save Help

---

### Link Setup

Port	Mode	Speed	Duplex	Apply
WAN	Auto <input type="checkbox"/>	10Mbps <input type="checkbox"/>	HALF <input type="checkbox"/>	<input type="button" value="Apply"/>
1	Auto <input type="checkbox"/>	10Mbps <input type="checkbox"/>	HALF <input type="checkbox"/>	<input type="button" value="Apply"/>
2	Auto <input type="checkbox"/>	10Mbps <input type="checkbox"/>	HALF <input type="checkbox"/>	<input type="button" value="Apply"/>
3	Auto <input type="checkbox"/>	10Mbps <input type="checkbox"/>	HALF <input type="checkbox"/>	<input type="button" value="Apply"/>
4	Auto mode only			

---

### Link Information

Port	WAN	1	2	3	4
Link	On	On	Off	Off	Off
Speed	100 Mbps	100 Mbps	-	-	-
Duplex	Full	Full	-	-	-

---

### Link Statistics

Port	WAN	1	2	3	4
Rx-Packets	21660	6390	0	0	0
Rx-Bytes	1927104	983177	0	0	0
Rx-Broadcast	21611	120	0	0	0
Rx-Multicast	0	2	0	0	0
Rx-Error	0	0	0	0	0
Tx-Packets	621	6971	0	0	0
Tx-Bytes	147052	2091256	0	0	0
Tx-Collision	0	0	0	0	0

*Picture showing 4 Port Version*

Link information, port speed and port statistics are shown on this page.

**Link Setup:** This section is for changing the link settings.

**Port:** The router's WAN and LAN ports.

**Mode:** Automatic mode and manual mode on/off. In Manual mode, you can define the connection speed. Auto is the default and recommended mode.  
**Speed:** When in Manual mode, you can define the port speed here: either 10 Mbps or 100 Mbps.

**Apply:** Apply current settings.

**Link Information:** This section displays link status.

**Port:** The router's WAN and LAN ports.

**Link:** Port is in use (on) or not connected (off).

**Speed:** Current port speed: 10 or 100 Mbps.

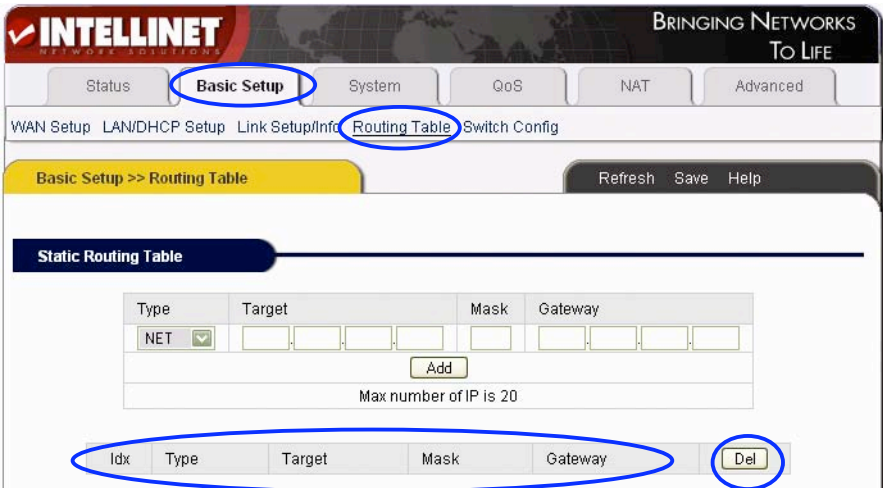
**Duplex:** Full or half duplex.

**Link Statistics:** Detailed traffic statistic for each port.

 **NOTE:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

#### 4.6.4 Routing Table (for advanced users only)

Click "Basic setup" → "Routing Table" to set up static routes:



**Type:** Routing Type NET or Host.

**Target:** Enter the IP address of the specified network or host you want to access using the static route.

**Mask:** Enter the subnet mask to be used for the specified network; e.g., 255.255.255.0 => 24.

**Gateway:** Enter in the gateway IP address for the specified network.

To save the new routing rule, click on the "Add" button. To delete a routing rule, check the selection box behind the entry and click on the "Del" button.



**NOTE:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

#### 4.6.5 Switch Configuration

Click “Basic setup” → ”Switch Config.”

The screenshot shows the Intellinet router configuration page. At the top, there's a navigation bar with tabs: Status, Basic Setup (circled in blue), System, QoS, NAT, and Advanced. Below this, there's a sub-navigation bar with links: WAN Setup, LAN/DHCP Setup, Link Setup/Info, Routing Table, and Switch Config (circled in blue). The main content area is titled 'Basic Setup >> Switch Config' and includes buttons for Refresh, Save, and Help. The 'Port Mirror' section has a checkbox for 'All packets to the Internet will be mirrored to sniffer port' and an 'Apply' button. The 'VLAN Configuration' section has a checkbox for 'Allow unicast packet' and an 'Apply' button. Below that, there are checkboxes for PORT 1, PORT 2, PORT 3, and PORT 4, followed by an 'Add' button and the text 'Max number of VLAN is 5.' The 'NAT Hardware Engine' section has a checked checkbox for 'Use NAT Hardware Engine' and an 'Apply' button.

**Port Mirror:** Activate to mirror all Internet traffic to the sniffer port (LAN Port 1).

**Allow Unicast Packets:** Activate this option to allow Unicast packets in your VLAN configuration.

**PORT 1 – PORT4:** Check the ports which should belong to the same VLAN and click "Add." You can create a maximum of 5 VLANs.

**NAT Hardware Engine:** Uncheck this option to turn the NAT hardware engine off.

#### 4.7 System

##### 4.7.1 Administrator Setup

Click “System” → “Admin Setup.”



**INTELLINET** NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

Status Basic Setup **System** QoS NAT Advanced

Admin Setup Firmware Upgrade System Log Misc.

System >> Admin Setup Refresh Save Help

### Login Account Setup

Current Login ID	root
Current Password	
New Login ID	
New Password	
Re-type New Password	
<input type="button" value="Apply"/>	

### Admin E-mail Setup

Admin E-mail	
Mail Server(SMTP)	
E-mail of sender	
<input type="checkbox"/> Use Authentication	
SMTP Account	
SMTP Password	
<input type="button" value="Apply"/>	

**Login Account Setup:** Enter your old ID and password and the new values. Click “Apply” to save the changes. The default Login ID is “root”; the default password is blank (no password).

**Admin E-Mail Setup:** If you want to receive router’s the system log via e-mail, configure e-mail address, SMTP server and authentication information here. Click “Apply” to save the changes.

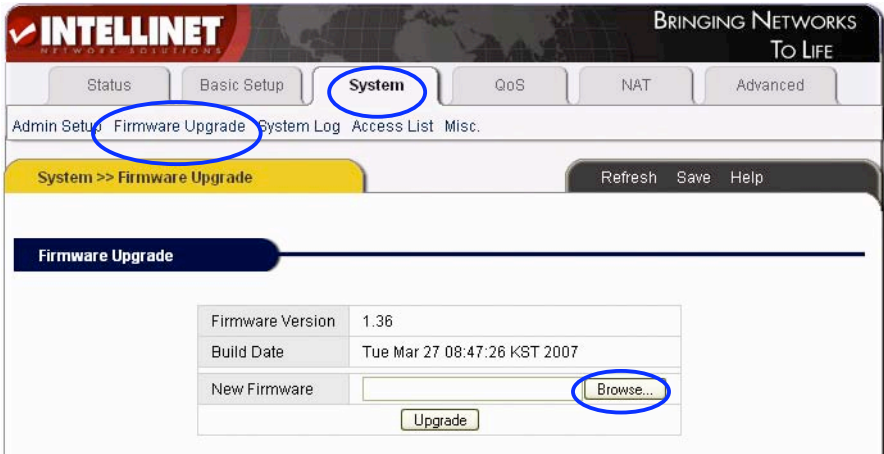


**NOTE:** It is strongly recommended that you change the administrator username and password during the initial setup. Failing to do so will allow any user to access the router’s administrator menu and change the configuration.

**NOTE:** If want to restore the factory default values, turn off the router, press the Reset button on the the device, and turn on the router while keeping the Reset button pressed. About 5 seconds later, the RUN LED will flash rapidly and you can then release the button. Once the startup sequence is complete, all configuration data will be restored to the default configuration.

## 4.7.2 Firmware Upgrade

Click “System” → “Firmware Upgrade.”

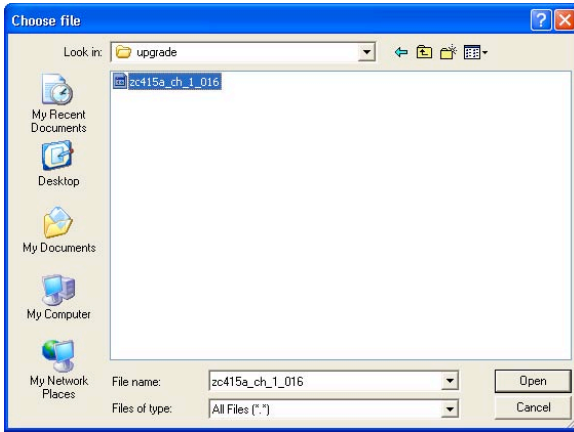


Firmware updates may be available from time to time for the router. Before contacting technical support, make sure that you have the latest firmware version installed on the router.

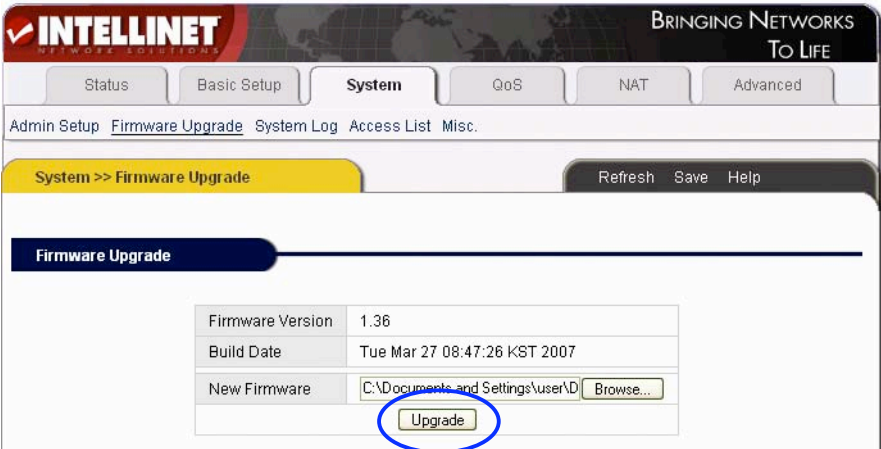
### Upgrade procedure:

1. Download an updated firmware version from [www.intellinet-network.com](http://www.intellinet-network.com).
2. Save the file on your local hard drive.
3. Uncompress the ZIP file.

4. Click on “Browse” and select the new firmware file. Click “Open.”




5. Click “Upgrade” to start the upgrade process.



### Firmware Upgrade

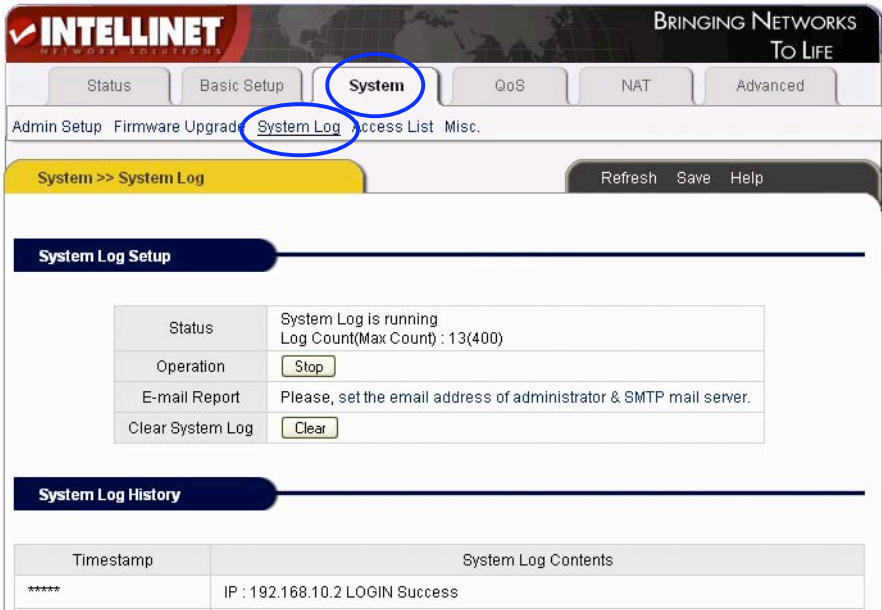
Upgrade process is completed.  
When the system is restarted, configuration page will be opened automatically.  
Please, wait a minute .....

The Router will restart automatically after the upgrade process is completed. After the upgrade, verify the firmware version.

 **NOTE: The upgrade process takes about 60 seconds. During this time, do not turn off the power; otherwise, router will be damaged.**

### 4.7.3 System Log

Click “System” → “System log.”



The screenshot shows the INTELLINET router web interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT, and Advanced. The 'System' tab is selected and circled in blue. Below the navigation bar, there are sub-tabs for Admin Setup, Firmware Upgrade, System Log, Access List, and Misc. The 'System Log' sub-tab is also circled in blue. The main content area is titled 'System >> System Log' and includes a 'Refresh Save Help' button. The 'System Log Setup' section contains a table with the following information:

Status	System Log is running Log Count(Max Count) : 13(400)
Operation	<input type="button" value="Stop"/>
E-mail Report	Please, set the email address of administrator & SMTP mail server.
Clear System Log	<input type="button" value="Clear"/>

The 'System Log History' section displays a table with the following data:

Timestamp	System Log Contents
*****	IP : 192.168.10.2 LOGIN Success

### System Log Setup

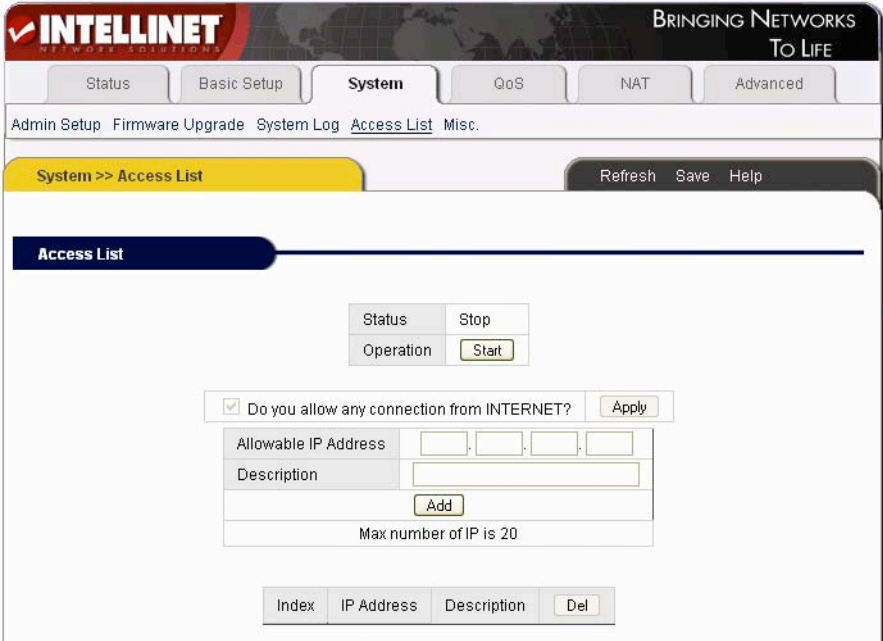
The router keeps track of system events. This screen allows you to activate or deactivate the service. You can also have the system log delivered to your e-mail (the E-Mail Setup in the Admin Configuration must be completed for this to work) and view the real-time system log of the router.

### System Log History

View the system log entries in your web browser.

### 4.7.4 Access List

Click "System" → "Access List."



### Access List

With this function you can limit access to the router based on the IP address of the computer. **IMPORTANT:** When you click "Start" to activate the service, you will see:



It is important to click "OK" here to make sure your computer still has access to the router. Otherwise, you lose connectivity to the router and a hardware reset may need to be performed in order to re-gain access. The option "Do you allow any connection from INTERNET?" can be activated if the Remote Management function is activated. It controls whether or not the client IP address is allowed to access the router's Web-based administration menu.

### 4.7.5 Miscellaneous Configurations

Click "System" → "Misc."

The screenshot shows the INTELLINET router configuration web interface. At the top, the logo 'INTELLINET NETWORK SOLUTIONS' is on the left, and 'BRINGING NETWORKS TO LIFE' is on the right. A navigation bar contains tabs for 'Status', 'Basic Setup', 'System', 'QoS', 'NAT', and 'Advanced'. The 'System' tab is selected and circled in blue. Below this, a secondary navigation bar includes 'Admin Setup', 'Firmware Upgrade', 'System Log', 'Access List', and 'Misc.', with 'Misc.' also circled in blue. The main content area is titled 'System >> Misc.' and includes a 'Refresh Save Help' button. The 'Hostname Setup' section has a 'Hostname' input field and an 'Apply' button. The 'Config Mgmt/Restart' section contains several buttons: 'Config Backup' (with description: 'Download configuration file into your PC'), 'Browse...' (with description: 'After browsing a configuration file, click "Config Restore" button'), 'Config Restore', 'Restore Default' (with description: 'To restore the factory default configuration, click this button.'), and 'Restart System' (with description: 'To restart the system, click this button. But, some configuration would be erased if you didnt save a configuration.'). The 'System Time Setup' section shows 'Current System Time' as 'Thu Jan 1 23:29:26 1970', a 'Time Server' dropdown set to 'time-c.timefreq.bldrdoc.gov', a 'Summer Time' checkbox, and a 'Standard Time Zone' dropdown set to '(GMT-12:00) Eniwetok, Kwajalein'. An 'Apply' button is at the bottom.

**Hostname Setup:** Configure the router’s device name used in the network.

**Config Mgmt/Restart:**

**Config Backup:** Back up the configuration data.

**Config Restore:** Restore previously saved the configuration data.

**Restore Default:** Restore the factory default configuration.

**Restart System:** Reboot the router.

**System Time Setup:** For the scheduler. Configure an accurate time system.

Refresh the router’s current time in the proper time zone, or choose another system server until the time to be refreshed.

**UPnP Setup**

Enable UPnP Server

---

**Auto Connecting Setup-Page**

Connect with a system setup-page automatically when a internet was disconnected

**UPnP Setup:** UPnP allows devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications and entertainment) and corporate environments. UPnP achieves this by defining and publishing UPnP device control protocols built upon open, Internet-based communication standards. The term UPnP is derived from Plug and Play, a technology for dynamically attaching devices to a computer directly. This option is enabled by default, and normally there is no need to disable it.

**Auto Connecting Setup-Page:** Displays the router's admin menu login page automatically, if the Internet connection is lost for whatever reason.

## 4.8 QoS

### 4.8.1 Basic Setup

Click "QoS" → "Basic Setup."

**INTELLINET** NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

Status Basic Setup System **QoS** NAT Advanced

Basic Setup **QoS** Application QoS Port QoS

QoS >> Basic Setup Refresh Save Help

**QoS Basic Setup**

QoS Status Started  
QoS Operation

**WAN Speed Setup**

Internet Type

Download Rate  Mbps  Upload Rate  Mbps

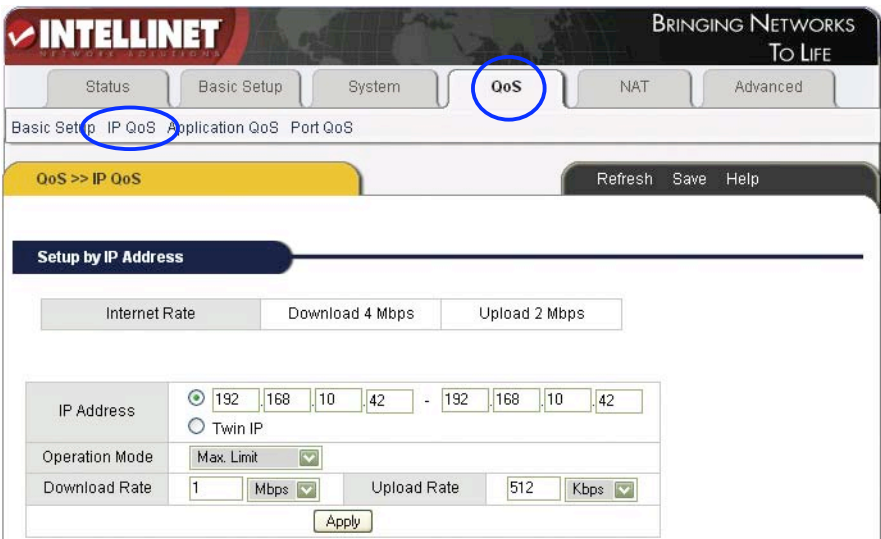
Not allow to use a radix point. ex) 2.5Mbps -> 2500Kbps

**QoS Basic Setup:** QoS stands for “Quality of Service.” It allows the control of Internet bandwidth based on different criteria such as IP address, port or application. Using QoS, you can limit the amount of bandwidth for a specific user, or you can guarantee a minimum amount of bandwidth for a specific application; for example, HTTP/WEB.

**WAN Speed Setup:** Define the speed of your Internet connection. You can either choose the type that is right for you from the list, or you can select “User Definition” and specify Download and Upload rate manually (2.5 Mbps should be entered as 2500 kbps). Changing these values will erase all QoS rules currently entered in the configuration.

### 4.8.2 IP QoS

Click “QoS” → “IP QoS.”



**Setup by IP Address:** You can limit or guarantee bandwidth for a single IP address or an IP address range.

**IP Address:** IP address or range to which this rule should be applied.

**Operation Mode:** Either “Max. Limit” or “Min. Guarantee.”

**Download/Upload Rate:** Specify individual values here.

**NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).



### 4.8.3 Application QoS

Click “QoS” → “Application QoS.”

The screenshot shows the INTELLINET router configuration interface. At the top, there is a navigation bar with tabs for Status, Basic Setup, System, QoS (highlighted with a blue circle), NAT, and Advanced. Below the navigation bar, there is a sub-menu with tabs for Basic Setup, IP QoS, Application QoS (highlighted with a blue circle), and Port QoS. The main content area is titled "QoS >> Application QoS" and includes a "Setup by Application" section. This section shows the Internet Rate settings: Download 4 Mbps and Upload 2 Mbps. Below this, there is a table with columns for Apps, Operation Mode, Download, and Upload. The table lists several applications with their respective operation modes and bandwidth settings.

Apps	Operation Mode	Download	Upload
<input type="checkbox"/> WWW(HTTP)	Max. Limit	0 Kbps	0 Kbps
<input type="checkbox"/> Soribada	Max. Limit	0 Kbps	0 Kbps
<input type="checkbox"/> GuruGuru	Max. Limit	0 Kbps	0 Kbps
<input type="checkbox"/> WinMX	Max. Limit	0 Kbps	0 Kbps
<input type="checkbox"/> eDonkey	Max. Limit	0 Kbps	0 Kbps
<input type="checkbox"/> MS Streaming	Max. Limit	0 Kbps	0 Kbps

Apply

Define the maximum bandwidth available, or the minimum guaranteed bandwidth for pre-defined applications.

**Setup Method:** Choose the application program; select the operation mode (Max. Limit or Min. Guarantee) and specify the bandwidth throughput value for download and upload. Click “Apply” to save the settings.

**NOTE:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.


## 4.8.4 Ports QoS

Click “QoS” → “Port QoS.”

The screenshot shows the INTELLINET router configuration interface. At the top, there is a navigation bar with tabs for Status, Basic Setup, System, QoS, NAT, and Advanced. The QoS tab is selected and circled in blue. Below the navigation bar, there is a sub-menu with tabs for Basic Setup, IP QoS, Application QoS, and Port QoS. The Port QoS tab is selected and circled in blue. The main content area is titled "QoS >> Port QoS" and includes a "Refresh Save Help" button. The "Setup by Port" section is active, showing "Internet Rate" with "Download 4 Mbps" and "Upload 2 Mbps". Below this, there are input fields for "External. Port #" (with a range selector), "Protocol" (set to TCP), "Operation Mode" (set to Max. Limit), "Download" (set to 0 Kbps), and "Upload" (set to 0 Kbps). An "Apply" button is located below these fields. At the bottom, there is a table with columns for Port #, Protocol, Op. Mode, Download, Upload, and a "Del" button.

Define the maximum bandwidth available, or the minimum guaranteed bandwidth for TCP or UDP ports and port ranges.

**Setup Method:** Enter the port or port range, select the protocol type, select the operation mode (Max. Limit or Min. Guarantee) and specify the bandwidth throughput value for download and upload. Click “Apply” to save the settings. If you want to delete current configuration, select the row to be deleted, and click “Del.”

 **NOTE:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

## 4.9 NAT

### 4.9.1 Applications

Click “NAT” → ”Applications.”

The screenshot shows the Intellinet router configuration interface. At the top, the Intellinet logo is on the left, and the slogan "BRINGING NETWORKS TO LIFE" is on the right. Below the logo is a navigation bar with tabs for Status, Basic Setup, System, GoS, NAT, and Advanced. The NAT tab is selected and circled in blue. Below the navigation bar is a sub-menu with "Applications" circled in blue, and other options like Internal Server, Port Forwarding, Port Trigger, and NAT On/Off. The main content area is titled "NAT >> Applications" and includes "Refresh", "Save", and "Help" buttons. A "Application Setup" section contains a table with columns for "Application" and "Internal IP Address".

Application	Internal IP Address
<input type="checkbox"/> BuddyBuddy	192 . 168 . 10 . [ ]
<input type="checkbox"/> WinAmp Broadcasting	192 . 168 . 10 . [ ]
<input type="checkbox"/> GuruGuru	192 . 168 . 10 . [ ]
<input type="checkbox"/> NetMeeting	192 . 168 . 10 . [ ]
<input type="checkbox"/> WinMx	192 . 168 . 10 . [ ]
<input type="checkbox"/> Windows XP/2000 Remote Desktop	192 . 168 . 10 . [ ]
<input type="checkbox"/> Network Drive	192 . 168 . 10 . [ ]
<input type="checkbox"/> H.323 Internet Phone	192 . 168 . 10 . [ ] 1719
<input type="checkbox"/> Soribada2	192 . 168 . 10 . [ ]
<input type="checkbox"/> Multicast Forward	To receive/send a Multicast data
The connected PC's IP address is 192.168.10.2	
<input type="button" value="Apply"/>	

Some programs, such as Internet network games, filesharing programs and Internet phones, need more than one connection. Because of the NAT firewall, some of the programs do not work correctly. The “Applications” function can make those programs work well with the High-Speed Broadband Router.

#### Setup Method:

1. Select the application program from the list.
2. Specify the IP address of the computer in your network that runs this application.
3. Click “Apply” to activate it.

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static

lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).  
The following list shows all applications and the ports they use:

Application	Port
BuddyBuddy	TCP 812, TCP 987
WinAmp Broadcasting	TCP 8000
GuruGuru	TCP 9292 TCP 9999
NetMeeting	TCP 1720
WinMX	TCP 6699 UDP 6257
Windows XP/2000 Remote Desktop	TCP 3389 UDP 3389
Soribada2	UDP22321

## 4.9.2 Internal Server

Click “NAT” → “Internal Server.”

The screenshot shows the INTELLINET router configuration interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT (selected), and Advanced. Below the navigation bar, the 'Internal Server' sub-tab is selected. The main content area is titled 'Internal Server Setup' and contains a table for configuring internal servers for various protocols. Below the table, there is a section for DMZ Host Setup.

Protocol	Internal Server IP Address	External Port #	Internal Port #
<input type="checkbox"/> DNS	192 .168 .10 .	53	53
<input type="checkbox"/> SMTP	192 .168 .10 .	25	25
<input type="checkbox"/> POP3	192 .168 .10 .	110	110
<input type="checkbox"/> HTTP	192 .168 .10 .	80	80
<input type="checkbox"/> News	192 .168 .10 .	119	119
<input type="checkbox"/> FTP	192 .168 .10 .	21	21
<input type="checkbox"/> Telnet	192 .168 .10 .	23	23
<input type="checkbox"/> SSH	192 .168 .10 .	22	22
<input type="checkbox"/> PPTP	192 .168 .10 .	1723	1723

The connected PC's IP address is 192.168.10.2

Apply

### DMZ Host Setup

DMZ 192 .168 .10 . ALL

The connected PC's IP address is 192.168.10.2

Apply

The NAT firewall protects the computers in the local network from unauthorized access from the Internet. Sometimes, however, it is required to allow access to a local computer; e.g., a local FTP server. The router's Internal Server function is designed to let you do that. Each internal server operates on one service port. All service requests to this port will be forwarded to the IP address specified.

**Function:** After setup, the router can allow some services, such as DNS, SMTP, POP3, HTTP, NEWS, FTP, Telnet, PPTP in LAN, to be accessed from the Internet. Or, by setting up a DMZ server you can have the router redirect all incoming requests to one local computer, bypassing the NAT firewall completely.

**Setup Method:**

1. Select the LAN service from the list below:

Protocol	Server
DNS	DNS (Domain Name Server)
SMTP	SMTP (Simple Message Transfer Protocol)
POP3	POP3 (Post Office Protocol)
HTTP	Web Server
News	News Server
FTP	FTP File Transfer Server
Telnet	Telnet Server
PPTP	VPN (Virtual Private Network)

2. Input the server's local IP address. Click "Apply" to activate the settings.
3. If you want to set up "DMZ Host," choose the "DMZ " option, then input the internal server's IP address you want to be opened to the Internet. The router transfers all received data packages except those that have been set up in "Internal Server" to the DMZ Host and allows the unlimited 2-way communication between the DMZ server and the Internet.

It is strongly recommend that a local firewall be enabled on the DMZ host computer, as it is no longer protected by the router's integrated NAT firewall.

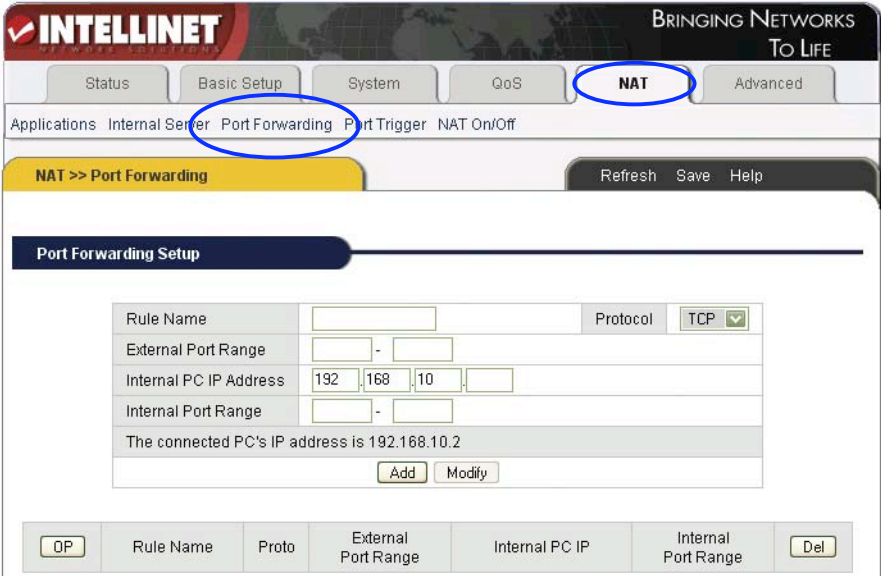
**Keep in mind: Placing a computer in the DMZ (demilitarized zone) is exposing the computer to potentially harmful attacks from the Internet.**



**NOTES: Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).**

### 4.9.3 Port Forwarding

Click “NAT” → ”Port Forwarding.”



Port Forwarding functions the same way as Internal Server, but it allows entering ranges of ports instead of single ports only. It also does not limit you to pre-defined services. Instead, you can control the entire TCP/IP port range.

#### Setup Method:

**Rule Name:** Enter a name which best describes the function of this rule.

**Protocol:** Port transfer protocol. There are two choices: TCP and UDP.

**External Port Range:** Port range that is open to the outside.

**Internal PC IP Address:** Where the router forwards traffic to the local computer.

**Internal Port Range:** Internal PC Port Range (in most cases this is identical to the External Port Range).

**Example:** You wish to run a “Silent Hunter III” server behind the router and want Internet users to be able to access the server remotely. Silent Hunter III requires ports ([http://www.portforward.com/english/applications/port\\_forwarding/SilentHunterIII/SilentHunterIIIindex.htm](http://www.portforward.com/english/applications/port_forwarding/SilentHunterIII/SilentHunterIIIindex.htm)) 17997–18003 for both TCP and UDP to be opened and forwarded. Your local Silent Hunter Server has the IP address 192.168.10.150.

**Rule Name:** SHIII TCP

**Protocol:** TCP


**External Port Range:** 17997–18003

**Internal PC IP Address:** 192.168.10.150

### Internal Port Range: 17997–18003

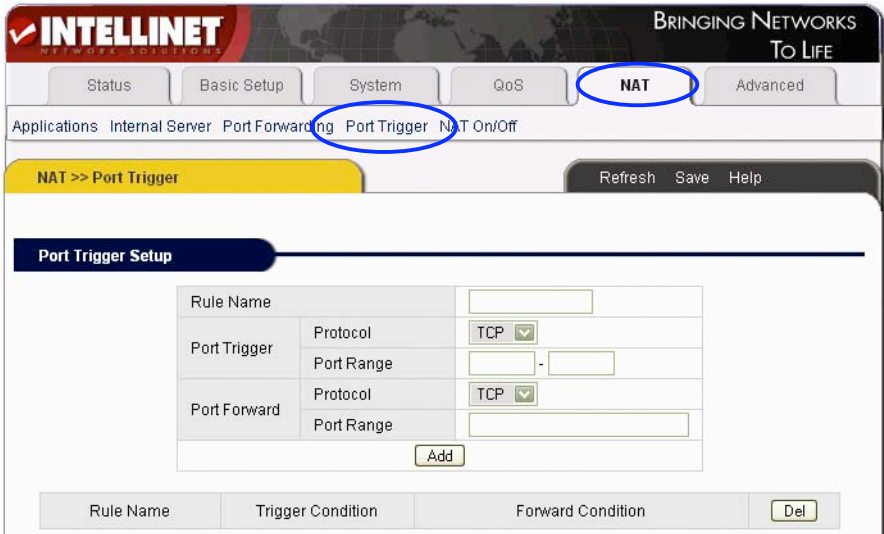
Click “Add.” Repeat the same steps, but this time with UDP (as Silent Hunter requires both TCP and UDP). After completion, you should have two new rules:

OP	Rule Name	Proto	External Port Range	Internal PC IP	Internal Port Range	Del
<input checked="" type="checkbox"/>	SHIII TCP	tcp	17997~18003	192.168.10.150	17997~18003	<input type="checkbox"/>
<input checked="" type="checkbox"/>	SHIII UDP	udp	17997~18003	192.168.10.150	17997~18003	<input type="checkbox"/>

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).

### 4.9.4 Port Trigger

Click “NAT” → “Port Trigger.”



The screenshot shows the INTELLINET router configuration interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT (circled in blue), and Advanced. Below the navigation bar, there are sub-tabs for Applications, Internal Server, Port Forwarding, Port Trigger (circled in blue), and NAT On/Off. The main content area is titled "NAT >> Port Trigger" and contains a "Port Trigger Setup" form. The form has the following fields:

- Rule Name: [Text input field]
- Port Trigger Protocol: [Dropdown menu, selected: TCP]
- Port Trigger Port Range: [Text input field] - [Text input field]
- Port Forward Protocol: [Dropdown menu, selected: TCP]
- Port Forward Port Range: [Text input field]

An "Add" button is located below the form. At the bottom of the screen, there is a table with the following columns: Rule Name, Trigger Condition, Forward Condition, and a "Del" button.

Some applications require a special port trigger setup. Simple port forwarding does not work.

**Port Trigger Setup Method:** Key in the rule name, define the protocol and range of the trigger port, then set up the protocol and range of the forward port. Click “Add” to add the rule.

**Rule Name:** The description of adding the trigger port.

**Port Trigger:** Set up the trigger port.



**Protocol:** Select the trigger port's protocol (TCP/UDP).

**Port Range:** Trigger port's range.

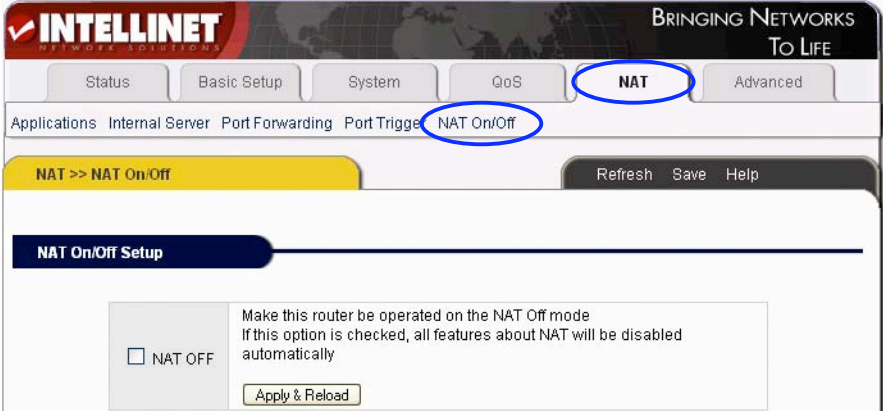
**Port Forward:** Set up the forward port.

**Protocol:** Select the forward port's protocol (TCP/UDP).

**Port Range:** Forward port's range.

#### 4.9.5 NAT On/Off

Click "NAT" → "NAT On/Off."



Use this function to completely disable the NAT function of the router.

## 4.10 Advanced Setup

### 4.10.1 Firewall

Click “Advanced” → “Firewall.”

The screenshot shows the Intellinet router's configuration interface. The top navigation bar includes 'Status', 'Basic Setup', 'System', 'QoS', 'NAT', and 'Advanced' (circled in blue). Below this, the 'Firewall' menu item is circled in blue. The main content area is titled 'Advanced >> Firewall' and contains two sections: 'Blocking DoS' and 'Connection Filtering'. The 'Blocking DoS' section has checkboxes for SYN Flooding, Smurf, IP source routing, IP Spoofing, Blocking ICMP (ping) from internet, and Blocking ICMP (ping) from LAN to internet, with an 'Apply' button. The 'Connection Filtering' section has a form with fields for Direction (LAN -> WAN), Source HW address, Source IP Address, Destination IP Address, Protocol, and Accept/Drop, with an 'Add' button. A table at the bottom shows columns for Direction, Source Address, Destination IP Address, Protocol, Dest. Port, A/D, Modify, and Del.

The router's firewall consists of two main functions.

1. **Blocking DoS:** This function helps to prevent so-called denial-of-service attacks.
2. **Connection Filtering:** Set of rules to accept or deny data traffic.

#### Blocking DoS:

**SYN Flooding, Smurf, IP source routing, IP Spoofing:** These are common attack types. These options should be enabled.

**Blocking ICMP (ping) from Internet:** A successful ping command is typically how

a hacking attempt starts, because the attacker first needs to know if a target is available or not. With this option activated, the router won't respond to any ping commands sent from the Internet.

**Blocking ICMP (ping) from LAN to Internet:** With this option activated, the router will not transport any outgoing ping command sent by a local station. It is for the protection against shock-wave attacks.

**Connection Filtering Setup Method:** Enter the parameters of connection filter. Click "Add" to apply the filter. If you want to delete a rule, then select the rule and click "Del."

**Direction:** Set up the orientation of the connection filter. There are two options: "WAN" → "LAN" and "LAN" → "WAN."

**Source IP Address:** IP address of the computer that sends the data.


**Net Mask:** Subnet mask of the computer that sends the data. For example, a network mask of 255.255.255.0 would be 24.

**Destination IP Address:** IP address of the computer that receives the data.

**Protocol:** There are four options: Any, TCP, UDP and ICMP. Any refers to all protocols.

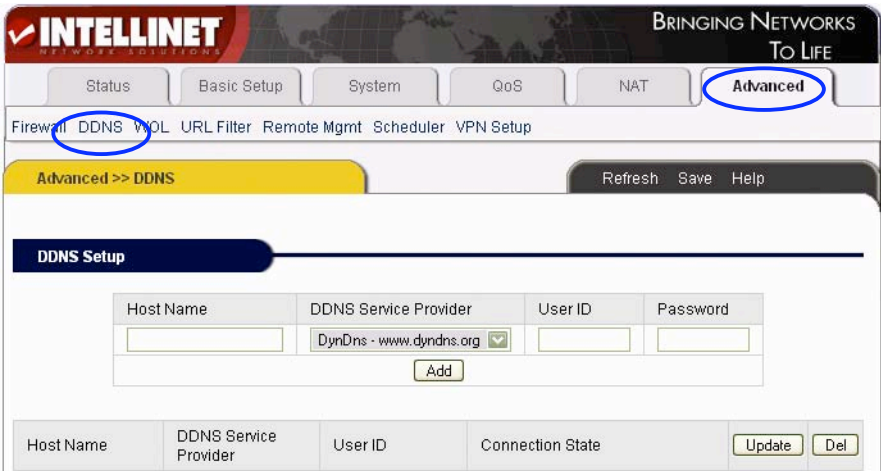
**Destination Port:** Protocol port of destination computer (not available if protocol option Any is chosen).

**Accept/Drop:** Set up "Connection Filtering" to accept or drop data package.

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).

#### 4.10.2 DDNS

Click "Advanced" → "DDNS" as follows:



The screenshot shows the Intellinet router configuration interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT, and Advanced (circled in blue). Below the navigation bar, there are links for Firewall, DDNS (circled in blue), WOL, URL Filter, Remote Mgmt, Scheduler, and VPN Setup. The main content area is titled "Advanced >> DDNS" and contains a "DDNS Setup" section. This section has a form with four columns: Host Name, DDNS Service Provider (with a dropdown menu showing "DynDns - www.dyndns.org"), User ID, and Password. An "Add" button is located below the form. At the bottom, there is a table with columns for Host Name, DDNS Service Provider, User ID, and Connection State, with "Update" and "Del" buttons for each row.

Dynamic DNS (DDNS) is a system that allows the domain name data held in a name server to be updated in real time. The most common use for this is in allowing an Internet domain name to be assigned to a computer (or router) with a dynamic IP address. This makes it possible for other sites on the Internet to establish connections to the machine without needing to track the IP address themselves. A common use is for running server software on a computer that has a dynamic IP address, as is the case with many consumer Internet service providers. The free DDNS provider DYNDNS.ORG is recommended. Before you can use the DDNS feature, you need to set up an account with DYNDNS.ORG and create a domain name; e.g., myrouter.dyndns.org.

**Host Name:** Enter the domain/host name you have registered with DYNDNS.ORG. This must be the full domain name; e.g., mydomain.dyndns.org, and not mydomain.

**DDNS Service Provider:** Select "DynDns.org."

**User ID:** Enter the DYNDNS username.

**Password:** Enter the DYNDNS password.

Click "Add" to create the account.

Remember to first create an account and host name at <http://www.dyndns.org>.

Once activated, the router will update the IP address automatically every time your ISP assigns a new address to you. That way, your DDNS domain name always points to your current public IP address.

### 4.10.3 WOL (Wake-on LAN)

Click "Advanced" → "WOL."

The screenshot shows the Intellinet router's web interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT, and Advanced (circled in blue). Below this is a sub-menu with Firewall, DDNS, WOL (circled in blue), URL Filter, Remote Mgmt, Scheduler, and VPN Setup. The main content area is titled 'Advanced >> WOL' and contains a 'WOL PC Registration' section. This section has a form with the following fields:

- PC Name: [Text input field]
- Physical Address: [Auto] [v] [08] [00] [46] [C4] [B2] [FA] [Search MAC address]
- [Add] button

Below the form is a table of registered PCs:

PC Name	Physical Address	Wake Up	Del
My Desktop PC	08:00:46:C4:B2:FA	[Wake-up PC]	[Del]

This function allows sending a wake-up signal to a connected computer in the LAN. Wake-on-LAN-capable computer systems reserve a minimum amount of power for the network adapter when turned off. The network card listens for a specific packet, called the Magic Packet. The router sends such a Magic Packet to a specific computer.

### Setup Method:

1. Enter the computer's name and the LAN card's MAC address. Then click "Add" to add new rule. You can search for the MAC addresses of all connected computers using the "Search MAC address" button.
2. Clicking on the "Wake-up PC" button sends the Magic Packet to the computer, which causes the computer to start up.
3. If you want to delete a rule, select the rule and click "Del."

**NOTE: This function only works with WOL-enabled computers.**

### 4.10.4 URL Filter

Click "Advanced" → "URL Filter."

The screenshot shows the INTELLINET router's configuration interface. The 'Advanced' tab is selected, and the 'URL Filter' sub-tab is active. The 'Filtering Rule' section is visible, showing a rule that is currently 'Started' and has a 'Stop' button. The IP Address field is set to 192.168.10.0 - 192.168.10.254. The Physical field has a search button for MAC addresses. The Input string field is empty, and the dropdown menu shows '----- Messenger -----'. An 'Add' button is located below the input string field. A table at the bottom of the page lists the filtering rule with columns for Filtering Address, Filter String/Application, and Del.

Filtering Address	Filter String/Application	Del
IP ADDRESS:192.168.10.2 - 192.168.10.254	sex xxx nude	Del

Control the content your LAN users access on the Internet through keywords that can be applied to all users, single IP addresses or single MAC addresses. If you want the filter to apply to all local IP addresses, you should enter the IP address range as defined by the DHCP server (default: 192.168.10.2 – 192.168.10.254). The input string holds the keywords to be blocked. Multiple keywords are entered with a space (e.g., keyword1 keyword2 keyword3). Alternatively, you can select an application from the drop-down list (e.g., eMule) to prevent local users from using those programs.

**Setup Method:**

**Status:** Current status of the URL filter: “Started” or “Stopped.”


**Operation:** Click “Start” or “Stop” to activate or deactivate the URL filter.

**IP Address:** Enter a single IP address or an IP address range for which this filter should be applied.

**Physical:** Enter the MAC address of the client computer for which this filter should be applied. Using the MAC address as opposed to the IP address always makes sure that the filter is applied to the same computer, regardless of its IP address.

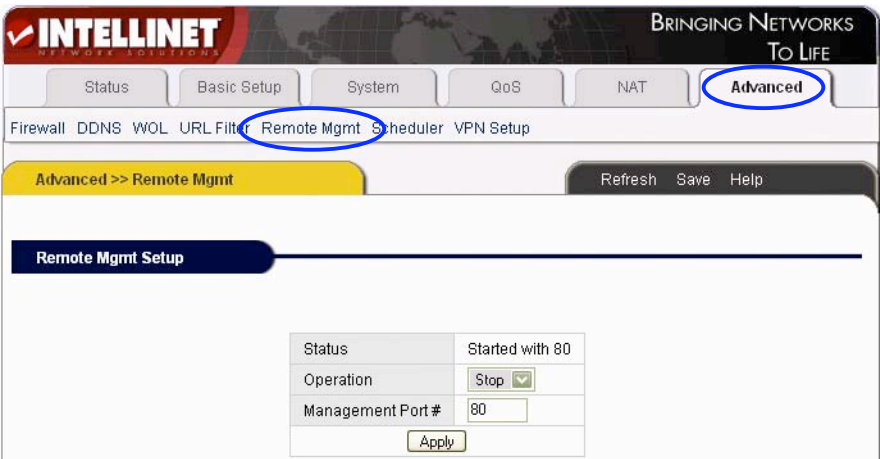
**Input String:** Enter the keywords that should be filtered.

- Input “http://www.xxx.com” to limit users to access http://www.xxx.com.
- Input Web sites’ keywords, such as “sex xxx” (note the blank space) to forbid users to access www.sex.com and www.xxx.com.
- Or, select an application from the drop-down list to prevent usage.

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).

**4.10.5 Remote Management**

Click “Advanced” → “Remote Mgmt.”



This page is to set up the router’s remote management. Remote Management allows configuration of the router from the Internet. By default, this function is turned off. On this page you can start or stop the remote management service and define the management port (default = 80). In order to access the remote management from the Internet, the user has to enter the following address in the Web browser: “http://public\_ip\_of\_router:remote\_management\_port.”

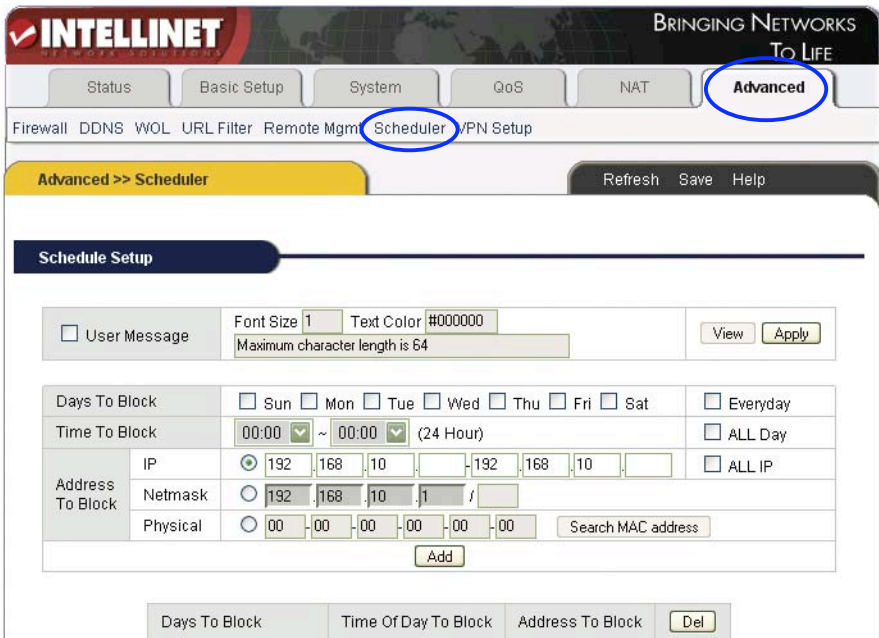
Example: http://123.456.789:8081 (remote management port set to 8081).

**NOTE:** Remote Management should be kept turned off, unless you are certain

you are going to need the functionality. Remote Management should never be enabled if the default administrator password has not been changed.

#### 4.10.6 Scheduler

Click “Advanced” → “Scheduler” as follows:



Using this function, you can disable Internet access for a specific computer or range of computers based on the time and day of week.

#### Setup Method:

1. Specify the days on which the access should be limited. Or you can select “Everyday” if you wish the restriction to occur every day during the week.
2. Specify the time window access should be restricted or select “ALL Day.”
3. Input the IP address, IP address range or MAC address of the computers you want to keep from accessing the Internet. Or select “ALL IP.”
4. Click “Add.”
5. If you want to delete a rule, select the rule and click “Del.”

## 4.10.7 VPN Setup

Click “Advanced” → “VPN Setup.”

The screenshot shows the router's configuration interface. At the top, the 'INTELLINET' logo is on the left, and 'BRINGING NETWORKS TO LIFE' is on the right. Below the logo is a navigation bar with tabs: Status, Basic Setup, System, QoS, NAT, and Advanced (circled in blue). Below the navigation bar is a sub-menu with tabs: Firewall, DDNS, WOL, URL Filter, Remote Mgmt, Scheduler, and VPN Setup (circled in blue). The main content area has a yellow header 'Advanced >> VPN Setup' and a dark grey header with 'Refresh', 'Save', and 'Help' buttons. The 'VPN(PPTP) Setup' section contains a table with the following data:

VPN Server Status	Stopped
Encryption(MPPE)	ON
Operation	Start
<input type="button" value="Apply"/>	

The 'VPN(PPTP) Account' section contains a table with the following data:

VPN Account	<input type="text"/>
VPN Password	<input type="password"/>
Assign IP Address	192   168   10   <input type="text"/>
<input type="button" value="Add"/>	

The device allows five users to establish a VPN tunnel (PPTP) to the router. A VPN tunnel is a secure and encrypted connection between the client and the server. The router supports the PPTP (Point-to-Point Tunneling Protocol) implementation of VPN with optional Microsoft Point-to-Point Encryption (MPPE). You can set up five different users with different passwords. Each user gets its own IP address. The connection state of each user is shown on this page, as well.

### Setup Method:

- 1. Start the VPN Service:** Select “Operation” → “Start” and click “Apply.” The router performs a restart, after which the VPN server is active.
- 2. Create VPN Users:** Enter a VPN username and password. Assign an IP address to the username (e.g., 192.168.1 0.200). Click “Add.” Repeat for additional users.
- 3. Delete VPN Users:** Select the user in the table shown under VPN (PPTP) Account and click “Del.”

 **NOTE:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.



## 5. SPECIFICATIONS

### Standards

- IEEE 802.3 (10Base-T Ethernet)
- IEEE 802.3u (100Base-TX Fast Ethernet)

### General

- LAN ports:
  - Model 523608: 4 RJ-45 10/100 Mbps data ports
  - Model 523615: 8 RJ-45 10/100 Mbps data ports
- LAN ports with Auto MDI/MDI-X
- LAN to WAN throughput: 94 Mbps
- Flash: 2 MB
- Memory: 16 MB SDRAM
- Certifications: FCC Class B, CE Mark, RoHS

### Router

- Chipset: KS8695PX (ARM9 CPU)
- Supported WAN connection types:
  - Dynamic IP (DHCP for cable service)
  - Static IP
  - PPPoE (for DSL)
- Protocols:
  - CSMA/CA
  - CSMA/CD
  - TCP/IP
  - UDP
  - ICMP
  - PPPoE
  - NTP
  - NAT (network address translation)
  - DHCP
  - DNS
- NAT:
  - Virtual server
  - Port forwarding
  - Special applications (port trigger)
  - DMZ (demilitarized zone)
- Firewall:
  - Access control based on MAC address
  - Domain blocking
  - URL filter
- Supports UPNP (Universal Plug and Play)
- Supports DHCP (client/server)
- Supports PPPoE (DSL), DHCP (cable) and static IP
- Supports VPN PPTP pass-through

- Certifications: FCC Class B, CE Mark, RoHS

**LEDs**

- Power
- OP (operational status)
- Power Line Link/Act
- WAN Link/Act
- LAN 1-4/8 Link/Act

**Environmental**

- Dimensions: 164 (W) x 108 (L) x 30 (H) mm (6.5 x 4.3 x 1.2 in.)
- Weight: 1.0 kg (2.2 lbs.)
- Operating temperature: 0 – 55°C (32 – 122°F)
- Operating humidity: 10 – 95% RH, non-condensing
- Storage temperature: 0 – 60°C (0 – 149°F)

**Power**

- External power adapter: 5 V DC, 1.0 A

**Package Contents**

- High Speed Broadband Router
- User manual
- Power cord
- Ethernet Cat5 RJ-45 cable, 1.5 m (5 ft.)





**[www.intellinet-network.com](http://www.intellinet-network.com)**

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